

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
16 May 2002 (16.05.2002)

PCT

(10) International Publication Number  
**WO 02/038673 A3**

(51) International Patent Classification<sup>7</sup>: **C08L 67/02**,  
77/00, C08K 3/00, B32B 27/36, B65D 1/26

US 60/273,610 (CON)  
Filed on 6 March 2001 (06.03.2001)

(21) International Application Number: PCT/US01/45254

(71) Applicant (for all designated States except US):  
**VALSPAR CORPORATION** [US/US]; P.O. Box 1461,  
Minneapolis, MN 55440 (US).

(22) International Filing Date: 31 October 2001 (31.10.2001)

(25) Filing Language: English

(72) Inventors; and  
(75) Inventors/Applicants (for US only): **SHARE, Paul, E.**  
[US/US]; 1501 Forest Edge Court, Wexford, PA 15090  
(US). **PILLAGE, Keith, R.** [US/US]; 255 Hoffman Road,  
Pittsburgh, PA 15212 (US).

(26) Publication Language: English

(30) Priority Data:  
60/246,834 8 November 2000 (08.11.2000) US  
60/276,610 6 March 2001 (06.03.2001) US

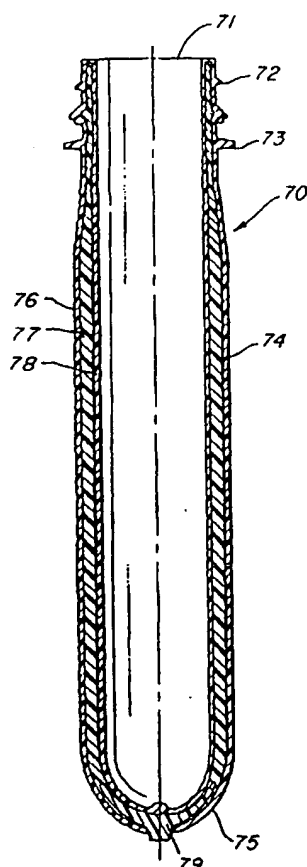
(74) Agent: **GWIN, H., Sanders**; Fish & Richardson P.C., P.A.,  
Suite 3300, 60 South 6th Street, Minneapolis, MN 55402  
(US).

(63) Related by continuation (CON) or continuation-in-part  
(CIP) to earlier applications:  
US 60/246,834 (CON)  
Filed on 8 November 2000 (08.11.2000)

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,

[Continued on next page]

(54) Title: MULTILAYERED PACKAGE WITH BARRIER PROPERTIES



(57) Abstract: The present invention provides compositions useful as a barrier layer in, for example, packaging products. The compositions generally comprise a blend of (i) a polyester resin, preferably an aromatic polyester resin such as polyethylene terephthalate (PET) and (ii) a polyamide material (e.g., MXD6). The blend optionally may further comprise (iii) an oxygen scavenging material. The present invention also provides containers (e.g., containers formed by expansion of preforms) having a multilayered body-forming portion including: a core layer comprising the aforementioned blend; and inner and outer layers of a formable polymer composition. The present invention also provides methods of making such containers.

WO 02/038673 A3



HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

**Published:**

— with international search report

(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) **Date of publication of the international search report:**

12 September 2002

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/45254

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08L67/02 C08L77/00 C08K3/00 B32B27/36 B65D1/26

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08L C08K B32B B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 501 781 A (KUSHIDA HIDEO ET AL) 26 February 1985 (1985-02-26)  column 4, line 54 -column 5, line 61; figure 1	1-6, 12-17, 24-26, 28-30, 32, 35, 38, 39
X	US 5 759 653 A (COLLETTE WAYNE N ET AL) 2 June 1998 (1998-06-02) column 10, line 23 - line 58; claim 26	1-9, 12-20
X	WO 95 11801 A (AMERICAN NATIONAL CAN CO) 4 May 1995 (1995-05-04) example 2; table 5  -/--	1-39



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

27 May 2002

Date of mailing of the international search report

04/06/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Lohner, P

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/45254

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 764 403 A (AJMERA PRAKASH R) 16 August 1988 (1988-08-16)  claim 9; tables II,III -----	22,23, 27,31, 33,36

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/45254

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4501781	A	26-02-1985	JP 58183243 A	26-10-1983
			AU 561894 B2	21-05-1987
			AU 1099383 A	27-10-1983
			CA 1205393 A1	03-06-1986
			DE 3381785 D1	13-09-1990
			DE 3382792 D1	21-09-1995
			DE 3382792 T2	04-01-1996
			EP 0092979 A2	02-11-1983
			EP 0212339 A2	04-03-1987
US 5759653	A	02-06-1998	AU 711170 B2	07-10-1999
			AU 4377996 A	03-07-1996
			AU 709271 B2	26-08-1999
			AU 4466996 A	03-07-1996
			BR 9510039 A	03-11-1998
			BR 9510457 A	15-12-1998
			CA 2207680 A1	20-06-1996
			CA 2207825 A1	20-06-1996
			EP 1167214 A2	02-01-2002
			EP 0797627 A1	01-10-1997
			EP 0797628 A1	01-10-1997
			JP 11514385 T	07-12-1999
			NZ 298945 A	29-11-1999
			WO 9618685 A1	20-06-1996
			WO 9618686 A1	20-06-1996
			US 5952066 A	14-09-1999
WO 9511801	A	04-05-1995	AU 692480 B2	11-06-1998
			AU 7983894 A	22-05-1995
			CA 2175051 A1	04-05-1995
			EP 0737131 A1	16-10-1996
			NZ 275751 A	24-02-1997
			WO 9511801 A1	04-05-1995
			US 6239210 B1	29-05-2001
			US 6288161 B1	11-09-2001
US 4764403	A	16-08-1988	AU 578566 B2	27-10-1988
			AU 7832387 A	12-05-1988
			CA 1291701 A1	05-11-1991
			DE 3737291 A1	19-05-1988
			FR 2606328 A1	13-05-1988
			GB 2197254 A , B	18-05-1988
			JP 1871239 C	06-09-1994
			JP 4020784 B	06-04-1992
			JP 63134240 A	06-06-1988
			ZA 8706265 A	01-03-1988